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ABSTRACT

As part of a larger, on-going study conducted through the Center for Child Development and Education at the University of Arkansas at Little Rock, this paper explores the influence of the home environment on children's psychological functioning in school and on their academic achievement. Data were obtained on home experience, classroom social competence and achievement measurements for 96 elementary school children in grades one through six. Measures of academic achievement were obtained from the standardized Science Research Associates test series for reading, language and mathematics. The 23 item Classroom Social Competence Scale (CSCS), reflecting the item content of the Kohn and Rosman (1972) Social Competence Scale was designed for this study to assess the children's classroom social competence, along the behavioral dimensions of withdrawal (non-participation and aggression), disruption, and task orientation. The Home Observation for Measurement of the Environment (HOME), designed by Caldwell and Bradley (in press), was used to measure the quality of stimulation, and the social, emotional and cognitive support available for the child's development. Multivariate multiple procedures were used to test the existence of associations between the three variables. Results revealed significant relationships across the three sets of variables. Patterns of these relationships suggest that early experience prepares the child to meet not only intellectual performance requirements but also social performance requirements. (Author/MP)

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EARLY HOME EXPERIENCE, CLASSROOM SOCIAL COMPETENCE AND ACADEMIC ACHIEVEMENT

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Early Home Experience, Classroom Social Competence and Academic Achievement

Abstract

This investigation explored the relationship of home environment, with psychological functioning in school and ~~on~~ with academic achievement. Quality of home experiences at age three, classroom social competence and standardized achievement measures were correlated for sixty-nine urban, Southern elementary school children. Significant, low to high moderate relationships exist across the three sets of variables. Patterns of relationships suggest that early experience prepares the child to meet, not only intellectual performance requirements, but also, social performance requirements.

Early Home Experience, Classroom Social Competence and Academic Achievement

The purpose of this investigation was to explore the influence of home environment on psychological functioning in school and on academic achievement.

Orienting Remarks

In the areas of educational, developmental and clinical psychology, research has been compartmentalized to study home environmental antecedents of classroom social behavior or home environmental influences on classroom achievement and intellectual functioning. An attempt to ameliorate this compartmentalization is made with this research, to the extent that it focuses on whether or not there is a similarity (viz., homology) among home experience antecedents which influence both classroom social behavior and academic achievement.

Kindergarten is often the first school experience of many children. The excitement and uneasiness the young child feels are, in part, a result of performance requirements, with these requirements falling into the categories of achievement and social competence (Jackson, 1968; Kohn, 1977; Mehan, 1979). Such requirements or expectations, for the most part, are defined by teachers or various other school personnel in the classroom setting. The child's first task in school is to discern what these requirements are, and to adapt his/her behavior accordingly. Thus, social learning, that is, the period of

adaptation or adjustment to the experience of schooling may influence early achievement behavior. Further, the child's successful passage through the transitional period of home to school may be influenced by the early developmental environment.

Research definitions of academic achievement are fairly standard and need not be dwelled upon here. Research definitions for classroom social expression are taken from Kohn (1977) and Jackson (1968). The classroom of the early school grades serves as the first formal evaluative setting for many children. The child is quick to learn that paper and pencil games have an attached system of rewards and punishments. Similarly, how the young school child involves himself/herself in classwork indicates the personal importance placed on positive evaluation. Such involvement includes completion of work, acceptance of criticism, initiative, cheerful anticipation of challenging tasks and satisfaction with personal success. For many children, the transition to teacher as authority figure is a major occurrence. Adaptation to this aspect of the classroom social setting includes a manifestation of non-disruptive behaviors, security, participation, involvement and cooperation, but not to the degree of obsequiousness.

Research findings are fairly consistent with regard to classroom social behavior and school achievement. In general, children found to be well adjusted receive higher grades and standardized achievement scores than maladjusted children (Cowen, Zax, Izzo, & Trost, 1966; Douglas & Mulligan, 1961).

Social behavior of maladjusted children with poor school performance includes attention-seeking, contentiousness, poor concentration, resentful and worrisome after criticism, withdrawn, frightened and friendless.

Precisely how and why the overlap in development of classroom social competence and academic achievement is assumed to exist is found in the research of many educational and developmental psychologists (Bing, 1963; Bradley & Caldwell, 1976a; 1976b; Carew, 1975a; 1975b; 1976; Deutsch, 1967; Elardo, Bradley & Caldwell, 1975; Hess & Shipman ,1965; Hunt, 1961; Kagan & Moss, 1962; Pedersen & Wender, 1968; Radin, 1973). These studies deal principally with the influence of home environment and early experience on intellectual development and school achievement. However, upon closer study, one finds the developmental graft of classroom social competence and achievement as growing from early home experiences that are inseparably cognitive and social.

An example of this experiential inseparableness is found in the research of Bradley and Caldwell. Apects of environment and experience during the first five years of life were found to change in nature and strength of association with cognitive development. For example, Bradley and Caldwell (1975a; 1976b) and Elardo, et al., (1975) found that increases in mental test performance at three years of age were related to maternal involvement (social), and provision of appropriate play materials (cognitive) in the six month old environment, while decreases in

performance at four and one-half years of age ~~was~~ were most related to these first two aspects of home environment plus emotional (social) and verbal (cognitive) responsivity of the mother during the first two years of life.

Additionally, research findings indicate that restrictive, routine experiences at home are associated with the child taking a similar approach to later learning, and hence, expressions of intelligence. Children from such an environment might be described as non-participatory, obedient, compliant, perhaps even shy or withdrawn. Conversely, active operation and manipulation of the early environment provide the child with a repetoire of capabilities to create novel experiences for herself/himself, which expand intellectual expression. Each of these descriptors connote cognitive and social expression.

Thus, the research here is predicated on the assumption that early learning experience is not at once either social or cognitive, but rather is simultaneously social and cognitive due to the nature of the parent-child relationship. The existence, nature, and strength of the following relationships were explored:

1) home experience and classroom social competence;
2) home experience and academic achievement;
3) classroom social competence and academic achievement.

Sample

As part of a larger, on-going study conducted through the Center for Child Development and Education at the University of Arkansas at Little Rock, complete data for sixty-nine elementary school children in grades one through six were available on home experience, classroom social behavior and achievement measurements. Approximately eighty percent of the children were Black and most were from lower to lower middle class family backgrounds, residing in the Little Rock metropolitan area, a Southern city of about 200,000.

Measures

Measures of academic achievement were obtained from the standardized Science Research Associates test series for reading, language arts and mathematics. Internal consistency estimates have been reported as ranging from .89 to .96 for reading, .88 to .95 for language arts, and .84 to .94 for mathematics (Science Research Associates, Inc., 1972).

A student behavior rating questionnaire was administered to the classroom teachers of these children, to assess aspects of their classroom social competence, along the behavioral dimensions of withdrawal - non-participation, aggression - disruption and task orientation. The twenty-three item Classroom Social Competence Scale (CSCS), designed for this study, reflects the item content of the Kohn and Rosman (1972) Social Competence Scale and Symptom Checklist. Internal consistency estimates for each of the three CSCS subscales and the CSCS total ranged from .72 to .95.

Embedded within the CSCS is the AML, an eleven item quick screenig device for early identification of school maladaptation (Cowen, Dorr, Clarfield, Dreling, McWilliams, Pokracki, Pratt, Terrell & Wilson, 1973). Five "aggressive - outgoing" items, five "moody - internalized" items and one "learning disability" item comprise the AML.

The Home Observation for Measurement of the Environment (HOME), designed by Caldwell and Bradley (in press), was used to measure the quality of stimulation and social, emotional and cognitive support available for the child's development. During the child's third year of life, a trained interviewer-observer made one-hour visits to each home, with the child awake and involved in their daily routine, while their mother or principal caregiver was present and available to the interviewer. Scoring on two-thirds of the items is based on direct observation, and one-third of the items are scored from verbal reports of the primary caregiver. Internal consistency estimates for the HOME subscales range from .53 to .88 (Caldwell and Bradley, in press). Raters are trained to achieve at least ninety percent agreement. The eight HOME subscales used in this study were:

1) stimulation through toys, games and reading materials;
2) language stimulation;
3) physical environment: safe, clean, conducive to development;
4) pride, affection, and warmth;
5) modeling and encouragement of social maturity;
6) stimulation of academic behavior;

7) variety of stimulation; and

8) absence of physical punishment.

Analytic Procedures

Multivariate multiple regression procedures were used to test the existence of a statistically significant association for: home experience (eight subscales) with classroom social competence (three subscales); home experience (eight subscales) with academic achievement (three subscales); and classroom social competence (three subscales) with academic achievement (three subscales). Simple and multiple correlations were used to indicate the strength and nature of these associations.

Results

Table 1 displays the summary statistics for the existence, nature and strength of association for the set of eight HOME dimensions with the set of three Classroom Social Competence dimensions. The overall statistical test for the regression of these two sets of variables was non-significant. However, a number of low moderate simple correlations were statistically significant and in the expected direction, indicating that inferior quality and low quantities of early home experience were associated with higher degrees of maladaptive classroom social behavior. HOME subscales significantly related to withdrawn - non-participatory classroom behavior were stimulation through toys, games, and reading materials and pride, affection, and warmth. These same two HOME subscales were significantly related to poor task orientation.

Table 1

Summary Statistics for the
Association of Home Environment (HOME) and Classroom Social Competence (CSC)

CORRELATIONS	CSC Scales			
HOME Scales	Withdrawn Behavior	Aggressive Behavior	Poor Task Orientation	CSC Total
Stimulation Through Toys, Games, and Reading Materials	-.24	-.13	-.25	-.22
Language Stimulation	-.14	-.02	-.06	-.07
Physical Environment: Safe, Clean, and Conducive to Development	-.23	-.10	-.16	-.17
Pride, Affection, and Warmth	-.33	-.22	-.24	-.28
Stimulation of Academic Behavior	-.19	-.05	-.10	-.11
Modeling and Encouragement of Social Maturity	-.03	.02	-.01	.00
Variety of Stimulation	-.17	-.15	-.22	-.20
Avoidance of Physical Punishment	-.02	-.02	-.05	-.03
HOME Total	-.26	-.14	-.22	-.21
MULTIPLE CORRELATIONS for 8 HOME Subscales with each CSC Subscale	.39	.30	.39	

MULTIVARIATE $F = .76$, $p > .78$, $df = 24, 169$
for regression of 8 HOME Subscales with 3 CSC Subscales

The correlation of HOME total and withdrawn - non-paticipatory classroom behavior produced a low moderate, significant coefficient. Relationships approaching significance included withdrawn classroom behavior with a safe, clean physical environment conducive to development and poor task orientation with variety of stimulation. Aggressive - disruptive behavior did not correlate to any significant degree with HOME subscales. The multiple correlations for the eight HOME subscales with each classroom social behavior subscale were slightly larger in magnitude, yet remained in the moderate range. Again, poor task orientation and withdrawn social behavior were most related to the HOME dimensions.

Table 2 displays the summary statistics for the existence, nature, and strength of association for the set of eight HOME dimensions with the set of three academic achievement subscales. The overall statistical test for the regression of these two sets of variables was only marginally non-significant. The simple correlations were in the expected positive direction, indicating that superior quality and high quantities of early home experience were associated with higher degrees of academic achievement. Across each type of academic achievement, the HOME scales which produced significant simple correlations were stimulation through toys, games, and reading materials; a safe, clean physical environment conducive to development; pride, affection and warmth; and variety of stimulation. Only two HOME subscales were not significantly related to achievement composite, stimulation of academic behavior and avoidance of physical punishment. The multiple correlations

Table 2

Summary Statistics for the
Association of Home Environment (HOME) and Academic Achievement

CORRELATIONS	Achievement			
	Reading	Language Arts	Mathematics	Composite
HOME Scales				
Stimulation Through Toys, Games, and Reading Materials	.51	.49	.42	.50
Language Stimulation	.23	.28	.25	.28
Physical Environment: Safe, Clean, and Conducive to Development	.34	.30	.36	.38
Pride, Affection, and Warmth	.35	.33	.34	.38
Stimulation of Academic Behavior	.12	.20	.19	.21
Modeling and Encouragement of Social Maturity	.23	.22	.19	.25
Variety of Stimulation	.25	.26	.35	.34
Avoidance of Physical Punishment	.01	-.01	.04	.03
HOME Total	.41	.41	.41	.46
MULTIPLE CORRELATIONS for 8 HOME Subscales with each Achievement Subscale	.59	.52	.49	

MULTIVARIATE $F = 1.57$, $p < .052$, $df = 24, 169$
for regression of 8 HOME Subscales
with 3 Achievement Subscales

for the eight HOME subscales with each achievement measure produced high moderate coefficients. Mathematics achievement produced the lowest multiple correlation with the set of eight HOME dimensions, while reading achievement produced the highest.

Table 3 displays the summary statistics for the existence, nature and strength of association for the set of three classroom social behaviors with the set of three academic achievement measures. The overall statistical test for the regression of these two sets of variables was significant. The simple correlations were in the expected negative direction, indicating that higher degrees of maladaptive classroom social behaviors were associated with lower levels of academic achievement. Across each type of academic achievement, and with composite achievement, poor task orientation produced the highest degree of association. Aggressive - disruptive behavior was next in magnitude of association. In addition, all simple correlations for the classroom social behaviors and achievement measures were significant, except for reading and withdrawn - non-participatory behavior. The multiple correlations for the three classroom social behaviors with each achievement measure produced high moderate coefficients. Reading achievement produced the lowest multiple correlation with the set of three classroom social behaviors, while mathematics produced the highest.

Discussion

The low degree of statistical significance for the first set of relationships between home environment and classroom social competence may take any of several explanations. Classroom behavior

Table 3

Summary Statistics for the
Association of Classroom Social Competence (CSC) and Academic Achievement

CORRELATIONS	Achievement			
CSC Scales	Reading	Language Arts	Mathematics	Composite
Withdrawn - Non-participatory Behavior	-.21	-.25	-.24	-.27
Aggressive - Disruptive Behavior	-.37	-.37	-.42	-.44
Poor Task Orientation	-.47	-.50	-.57	-.58
CSC Total	-.41	-.44	-.48	-.51
MULTIPLE CORRELATIONS for 3 CSC Subscales with each Achievement Subscale	.47	.50	.58	
MULTIVARIATE $F = 3.31$, $p < .001$, $df = 9, 153$ for regression of 3 CSC Subscales with 3 Achievement Subscales				

is influenced by a wide variety of factors which include social situation - specific home, school and community factors, teacher personality characteristics, and individual student personality characteristics. In addition, students' classroom behavior ratings spanned primary grades one through six, while all home environments were assessed in a more restricted preschool age range (thirty-six to fifty-four months). This temporal discontinuity in general, attentuates results in the study of developmental relations. Finally, sample size may have attenuated the results.

In general, however, these results indicate a moderate level of association between the types of events encountered and transactions executed by children in their preschool environments and their subsequent academic social and cognitive competence. Early experience seems to provide the child with information on how to approach an environment, a setting, or new experience. Successful accomodation to and subsequent performance success in a new environment seem to depend on the quality and frequency of novel early experiences which are cognitive and social.

Specifically, these findings strongly suggest that early home experience principally prepares the child to meet the performance requirements for academic cognitive expression to a greater degree than academic social expression. The preschool dimensions of experience indicative of academic achievement success specifically include: manipulative and material stimulation; variety of stimulation; caregiver warmth, pride, and affection, facilitating the child's security and self-esteem; and

a safe, clean physical environment engendering trust and curiosity. However, evidence provided here indicated that academic achievement success is also substantially related to expressions of academic social competence. The academic social dimensions indicative of academic achievement success include the student's ability to become involved with and complete school related tasks in a cooperative, compliant manner. Finally, results, albeit in the form of trends, suggest that the aspects of home experience most involved with successful academic social expression are caregiver warmth, pride and affection and manipulative and material stimulation. Thus, even if these results appear as preliminary and exploratory, it is reasonable to conclude that early home experience, which is both cognitive and social, is facilitative of academic competence which is likewise cognitive and social in nature.

In future research it would be desirable to investigate relationships among family status variables, which mediate quantity and quality of early experience and subsequent academic social and cognitive behaviors. Additionally, studies might include specification of teacher personality variables, classroom setting and curriculum type variables. Finally, independent rater-observation of student calssroom social behaviors, and a closer temporal match between assessments of home experience and classroom academic and social competence would serve to increase external validity in development - environment field setting research of this nature.

References

Bing, Elizabeth. Effect of childrearing practices on development of differential cognitive abilities. Child Development, 1963, 34, 631-648.

Bradley, R. H. & Caldwell, Bettye M. Early home environment and changes in mental test performance in children 6 to 36 months. Developmental Psychology, 1976, 12, 93-97. (a)

Bradley, R. H. & Caldwell, Bettye M. The relations of infants' home environments to mental test performance at fifty-four months: A follow-up study. Child Development, 1976, 47, 1172-1174. (b)

Caldwell, Bettye M. & Bradley, R. H. Home observation for measurement of the enviornment. New York: Darsey, (in press).

Carew, Jean V. Social class, everyday experience and the growth of intelligence in young children. Paper presented at the meeting of the Third Biennial Conference of the International Society for the Study of Behavioral Development, Guildford, England, 1975. (a)

Cowen, E. L., Zax, M., Izzo, L. D., Trost, MaryAnn. Prevention of emotional disorders in the school setting: A further investigation. Journal of Consulting Psychology, 1966, 30, 381-387.

Cowen, E. L., Dorr, D., Clarfield, S., Dreling, Barbara, McWilliams, S. A., Pokracki, Francine, Pratt, D. M., Terrell, D., & Wilson, Alice. The AML: A quick-screening device for early identification of school maladaptation. American Journal of Community Psychology, 1973, 1, 12-35.

Deutsch, M. & Associates. The disadvantaged child. New York: Basic Books, Inc., 1967.

Douglas, J. W. B. & Mulligan, D. G. Emotional adjustment and educational achievement -- the preliminary results of a longitudinal study of a national sample of children. Proceedings of the Royal Society of Medicine, 1961, 54, 885-891.

Elardo, R., Bradley, R. H., & Caldwell, Bettye M. The relation of infants' home environments to mental test performance from 6 to 36 months: A longitudinal analysis. Child Development, 1975, 46, 71-76.

Hess, R. D. & Shipman, Virginia C. Early experience and the socialization of cognitive modes in children. Child Development, 1965, 36, 869-886.

Hunt, J. McV. Intelligence and experience. New York: Ronald Press Company, 1961.

Jackson, P. W. Life in classrooms. New York: Holt, Rinehart & Winston, Inc., 1968.

Kagan, J. & Moss, H. A. Birth to maturity. New York: John Wiley & Sons, Inc., 1962.

Kohn, M. Social competence, symptoms and underachievement in childhood: A longitudinal perspective. Washington, D. C. : V. H. Winston & Sons, 1977.

Kohn, M. & Rosman, Bernice. Cognitive functioning in five year old boys as related to social-emotional and background-demographic variables. Developmental Psychology, 1973, 8, 277-294.

Kohn, M. & Rosman, Bernice. A social competence scale and symptom checklist for the preschool child: Factor dimensions, their cross-instrument generality, and longitudinal persistence. Developmental Psychology, 1972, 6, 430-444.

Mehan, H. Learning lessons: Social organization in the classroom. Cambridge, Massachusetts: Harvard University Press, 1979.

Pedersen, F. A. & Wender, P. H. Early social correlates of cognitive functioning in six year old boys. Child Development, 1968, 39, 185-194.

Radin, Norma. Observed paternal behaviors as antecedents of intellectual functioning in young boys. Developmental Psychology, 1973, 8, 369-376.

Science Research Associates, Inc. Using test results: A teacher's guide. Palo Alto: Science Research Associates, Inc., 1972.